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ART UNIT	PAPER NUMBER
2172	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	**Applicant(s)**
Office Action Summary	09/981,320	ABBOTT ET AL.
	Examiner	**Art Unit**	
	NAMITHA PILLAI	2172	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 September 2011</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____ ; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) <u>1,3,6-10,13-21,24,26,27,31-39,44,46,57,59,60,71-77,79 and 80</u> is/are pending in the application.

    5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) <u>1,3,6-10,13-21,24,26,27,31-39,44,46,57,59,60,71-77,79 and 80</u> is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9/20/11</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   This Office action is responsive to the Request for Continued Examination (RCE)

filed under 37 CFR §1.53(d) on 8/5/11.   Applicants have properly set forth the RCE,

which has been entered into the application, and an examination on the merits follows

herewith. The Examiner acknowledges amendments to claims 1, 20, 24, 57 and the

addition of new claim 80. All pending claims are rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 3, 6-10, 13-21, 24, 26, 27, 31-39, 44, 46, 57, 59, 60, 71-77 and 79-80

are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 5,

740, 037 (McCann et al.), herein referred to as McCann, U. S. Patent No. 5,555,376

(Theimer et al.), herein referred to as Theimer and U. S. Patent No. 5, 689, 619

(Smyth).

        Referring to claim 1, McCann discloses a computer-implemented method for

dynamically determining an appropriate user interface of a plurality of pre-defined user

interfaces to be presented to a user of a computing device for presenting of information

associated with a task (column 2, lines 32-34). McCann discloses employing a

processor to execute computer executable instructions stored on a computer readable

medium to perform the following acts (Figure 1). McCann discloses determining context

of the user and automatically selecting for presentation to the user one of the predefined

user interfaces, wherein the selection is a function of the determined cognitive

availability of the user and the user context (column 2, lines 32-42). The context of the

user is represented by a plurality of context attributes that each model an aspect of the

context (column 2, lines 31-36). McCann discloses presenting to the user information

associated with the task, presenting the user the selected predefined interface (column

2, lines 38-42). McCann does not clearly disclose that the automatically selecting is

done without user intervention. Theimer discloses that a user interface is automatically

selected without user intervention (column 13, lines 29-45). It would have been obvious

to one skilled in the art at the time of the invention to learn from Theimer automatically

selecting is done without user intervention. The user accessing the user interface in

McCann is faced with various distractions while in combat. Providing an automatic

selection means that minimizes user intervention would be beneficial to the user to

concentrate on their surroundings. This provides motivation for McCann to learn from

Theimer. Therefore one skilled in the art at the time of the invention would have been

motivated to learn from Theimer automatically selecting is done without user

intervention.

McCann and Theimer do not disclose dynamically selecting based on

determination of a quantity of information the user has cognitive availability to receive in

a background mode. Smyth discloses automatically selecting comprising determining a

quantity of information the user has cognitive ability to receive in a background mode

automatically. Smyth discloses automatically selecting a user interface including an amount of background information that is less than the user has the availability to receive. See column 4, lines 41-61. It would have been obvious to one skilled in the art at the time of the invention to learn from Smyth dynamically selecting based on determination of a quantity of information the user has cognitive availability to receive in a background mode. Smyth discloses providing more user interface options for a user operating a user interface under military operations. These options can be used to provide the user with a better experience for the system used in McCann and Theimer. Therefore one skilled in the art at the time of the invention would have been motivated to learn from Smyth based on determination of a quantity of information the user has cognitive availability to receive in a background mode.

McCann, Theimer and Smyth do not disclose presenting a visual indicator in peripheral vision of the user. Chai discloses that when the user is determined to have cognitive availability for information representing one type of feedback, presenting the selected predefined user interface comprises presenting one visual indicator in peripheral vision of the user (column 11, lines 40-60). It would have been obvious to one skilled in the art at the time of the invention to learn from Chai presenting a visual indicator in peripheral vision of the user. Presenting the data in peripheral vision of the user allows for the user to view data without being overloaded with information on the main view. This provides motivation for McCann, Theimer and Smyth to present data in the peripheral vision of the user. One skilled in the art at the time of the invention would

have been motivated to learn from Chai presenting a visual indicator in peripheral vision of the user.

Referring to claim 3, McCann discloses that the computing device is a wearable personal computer (Figure 7).

Referring to claim 6, McCann discloses that the automatically selecting is performed at execution time (column 2, lines 37-41).

Referring to claim 7, McCann discloses that the determining and the automatically selecting are dynamically performed repeatedly so that the user interface that is presented to the user is appropriate to current needs (column 2, lines 32-53).

Referring to claim 8, McCann discloses that the dynamic determining and the automatically selecting are performed repeatedly so that the user interface that is presented to the user is optimal with respect to the current needs (column 2, lines 32-53).

Referring to claim 9, McCann discloses that the determining of the current needs includes at least one of characterizing user interface ("UI") needs corresponding to a current task being performed, characterizing UI needs corresponding to a current situation of the user, or characterizing UI needs corresponding to current I/O devices that are available (column 2, lines 32-53).

Referring to claim 10, McCann discloses that the determining of the current needs includes characterizing user interface ("UI") needs corresponding to a current task being performed, characterizing UI needs corresponding to a current situation of

the user, and characterizing UI needs corresponding to current I/O devices that are available (column 2, lines 32-53).

Referring to claim 13, McCann discloses that the automatically selected user interface includes information to be presented to the user and interaction controls that can be manipulated by the user (column 2, lines 18-22).

Referring to claim 14, McCann discloses monitoring the user in order to produce information about the current context, or monitoring a surrounding environment of the user in order to produce information about the current context, or monitoring the user and the surrounding environment of the user in order to produce information about the current context (column 2, lines 32-53).

Referring to claim 15, McCann discloses that the current needs are determined based at least in part on the current context (column 2, lines 31-37).

Referring to claim 16, McCann discloses customizing the automatically selected user interface based on the user before presenting of the customized user interface to the user (column 2, lines 43-48).

Referring to claim 17, McCann discloses adapting the automatically selected user interface to a type of the computing device before presenting of the adapted user interface to the user (column 2, lines 15-20).

Referring to claim 18, McCann discloses adapting the automatically selected user interface to a current activity of the user before presenting of the adapted user interface to the user (column 2, lines 32-37).

Referring to claim 19, McCann discloses determining of the current needs is based at least in part on the user being mobile (column 2, lines 32-43).

Referring to claim 20, McCann discloses a computer-readable medium having stored thereon computer executable instructions for carrying out the following acts (column 2, lines 11-16). McCann discloses dynamically determining cognitive availability of a user, the cognitive availability is a function of an amount of attention the user uses during a computer-assisted task (column 2, lines 32-45). McCann discloses that the cognitive availability comprising at least one of an expertise of the user, an ability to extend short term memory or distractions associated with the user (column 2, lines 43-48). McCann discloses dynamically determining one or more current needs for a user interface to be presented to the user (column 2, lines 38-41). McCann discloses selecting for presentation to the user one of a plurality of predefined user interfaces whose characterized properties correspond to the dynamically determined cognitive availability of the user and current needs and presenting the selected user interface to the user (column 2, lines 32-53). McCann does not clearly disclose that the selecting is done without user intervention. Theimer discloses that a user interface is selected without user intervention (column 13, lines 29-45). It would have been obvious to one skilled in the art at the time of the invention to learn from Theimer selecting is done without user intervention. The user accessing the user interface in McCann is faced with various distractions while in combat. Providing a selection means that minimizes user intervention would be beneficial to the user to concentrate on their surroundings. This provides motivation for McCann to learn from Theimer. Therefore one skilled in the

art at the time of the invention would have been motivated to learn from Theimer

selecting is done without user intervention.

McCann and Theimer do not disclose dynamically selecting based on

determination of a quantity of information the user has cognitive availability to receive in

a background mode. Smyth discloses dynamically selecting comprising determining a

quantity of information the user has cognitive ability to receive in a background mode.

Smyth discloses selecting a user interface including an amount of background

information that is less than the user has the availability to receive. See column 4, lines

41-61. It would have been obvious to one skilled in the art at the time of the invention to

learn from Smyth dynamically selecting based on determination of a quantity of

information the user has cognitive availability to receive in a background mode. Smyth

discloses providing more user interface options for a user operating a user interface

under military operations. These options can be used to provide the user with a better

experience for the system used in McCann and Theimer. Therefore one skilled in the

art at the time of the invention would have been motivated to learn from Smyth based

on determination of a quantity of information the user has cognitive availability to

receive in a background mode.

McCann, Theimer and Smyth do not disclose presenting a visual indicator in

peripheral vision of the user. Chai discloses that when the user is determined to have

cognitive availabity for information representing one type of feedback, presenting the

selected predefined user interface comprises presenting one visual indicator in

peripheral vision of the user (column 11, lines 40-60). It would have been obvious to

one skilled in the art at the time of the invention to learn from Chai presenting a visual

indicator in peripheral vision of the user. Presenting the data in peripheral vision of the

user allows for the user to view data without being overloaded with information on the

main view. This provides motivation for McCann, Theimer and Smyth to present data in

the peripheral vision of the user. One skilled in the art at the time of the invention would

have been motivated to learn from Chai presenting a visual indicator in peripheral vision

of the user.

Referring to claim 21, McCann discloses that the computer-readable medium is a

memory of a computing device (column 2, lines 11-16).

Referring to claim 24, McCann discloses a computing device for dynamically

determining an appropriate user interface to be presented to a user of a computing

device (column 2, lines 32-34). McCann discloses a processor, a memory

communicatively coupled to the processor, the memory having stored therein computer-

executable instructions configured to dynamically determine an appropriate user

interface (Figure 1). McCann discloses a first component capable of, for each of

multiple defined user interfaces, characterizing properties of the defined user interface

(column 2, lines 38-53). McCann discloses a second component capable of

determining during execution one or more current needs for a user interface to be

presented to the user, wherein the determining includes determining cognitive load of

the user (column 2, lines 38-42). McCann discloses that the cognitive loads include a

cognitive availability of the user that is a function of an amount of time the user has

between tasks, wherein a focus task requires a user's primary attention (column 2, lines

43-48). McCann discloses a third component capable of selecting during execution one

of the defined user interfaces whose characterized properties correspond to the

dynamically determined current needs, the selected user interface for presentation to

the user (column 2, lines 32-42). McCann does not clearly disclose that the selecting is

done without user intervention. Theimer discloses that a user interface is selected

automatically without user intervention (column 13, lines 29-45). It would have been

obvious to one skilled in the art at the time of the invention to learn from Theimer

selecting is done without user intervention. The user accessing the user interface in

McCann is faced with various distractions while in combat. Providing a selection means

that minimizes user intervention would be beneficial to the user to concentrate on their

surroundings. This provides motivation for McCann to learn from Theimer. Therefore

one skilled in the art at the time of the invention would have been motivated to learn

from Theimer selecting is done without user intervention.

   McCann and Theimer do not disclose that the complexity of the selected

interface being based on amount of time determined by the second component. Smyth

discloses that the complexity of the selected interface being based on the amount of

time determined by the second component that the user has between focus tasks. See

column 4, lines 41-61. It would have been obvious to one skilled in the art at the time of

the invention to learn from Smyth that the complexity of the selected interface being

based on amount of time determined by the second component. Smyth discloses

providing more user interface options for a user operating a user interface under military

operations. These options can be used to provide the user with a better experience for

the system used in McCann and Theimer. Therefore one skilled in the art at the time of

the invention would have been motivated to learn from Smyth that the complexity of the

selected interface being based on amount of time determined by the second

component.

McCann, Theimer and Smyth do not disclose presenting a visual indicator in

peripheral vision of the user. Chai discloses that when the user is determined to have

cognitive availabity for information representing one type of feedback, presenting the

selected predefined user interface comprises presenting one visual indicator in

peripheral vision of the user (column 11, lines 40-60). It would have been obvious to

one skilled in the art at the time of the invention to learn from Chai presenting a visual

indicator in peripheral vision of the user. Presenting the data in peripheral vision of the

user allows for the user to view data without being overloaded with information on the

main view. This provides motivation for McCann, Theimer and Smyth to present data in

the peripheral vision of the user. One skilled in the art at the time of the invention would

have been motivated to learn from Chai presenting a visual indicator in peripheral vision

of the user.

Referring to claim 26, McCann discloses a computer system for dynamically

determining an appropriate user interface to be presented to a user of a computing

device (column 2, lines 32-34). McCann discloses means for, for each of multiple

defined user interfaces, characterizing properties of the defined user interface (column

2, lines 38-53). McCann discloses a processor, a memory communicatively coupled to

the processor, the memory having stored therein computer-executable instructions

configured to dynamically determine an appropriate user interface (Figure 1). McCann

discloses means for determining during execution one or more current needs for a user

interface to be presented to the user, wherein the determining includes determining

cognitive availability of the user, the cognitive availability is a function of an amount of

attention the user uses during a computer-assisted task (column 2, lines 32-53).

McCann discloses means for selecting during execution one of the defined user

interfaces whose characterized properties correspond to the dynamically determined

current needs, the selected user interface for presentation to the user (column 2, lines

32-53). McCann does not clearly disclose that the selecting is done without user

intervention. Theimer discloses that a user interface is selected without user

intervention (column 13, lines 29-45). It would have been obvious to one skilled in the

art at the time of the invention to learn from Theimer selecting is done without user

intervention. The user accessing the user interface in McCann is faced with various

distractions while in combat. Providing a selection means that minimizes user

intervention would be beneficial to the user to concentrate on their surroundings. This

provides motivation for McCann to learn from Theimer. Therefore one skilled in the art

at the time of the invention would have been motivated to learn from Theimer selecting

is done without user intervention.

Referring to claim 27, McCann discloses a method for dynamically determining

an appropriate user interface to be presented to a user of a computing device based on

a current context (column 2, lines 32-34). McCann discloses determining multiple user

interface elements that are available for presentation on the computing device (column

2, lines 32-37). McCann discloses employing a processor executing computer executable instructions stored on a computer readable storage medium to implement the features claimed below (Figure 1). McCann discloses characterizing properties of the determined user interface elements, dynamically determining cognitive availability of the user, the cognitive availability is a function of an amount of attention the user uses during a computer-assisted task (column 2, lines 38-48). McCann discloses dynamically determining one or more current needs for a user interface to be presented to the user (column 2, lines 32-34). McCann discloses generating a first user interface for, the first user interface having user interface elements whose characterized properties correspond to the dynamically determined current needs and cognitive availability of the user, the determined cognitive availability being a first cognitive availabity and being cognitive availabity for information presenting one type of feedback (column 2, lines 32-52). McCann discloses presenting the first user interface to the user (column 2, lines 38-43). McCann discloses presenting the second user interface to the user (column 2, lines 43-48). McCann discloses monitoring the user in order to produce information about the current cognitive ability of the user, repeating the dynamically determining cognitive availability of the user cognitive availability, repeating the dynamically determining one or more current needs for a user interface to be presented to the user, generating a second user interface, the second user interface having user interface elements whose characterized properties correspond to the dynamically determined current needs and cognitive availability of the user, the dynamically determined cognitive availability being a second cognitive availability and being

cognitive availabity for two types of feedback (column 2, lines 30-60). McCann does not clearly disclose that the determining is done without user intervention. Theimer discloses that a user interface is selected in response to determining cognitive availability and current needs without user intervention (column 13, lines 29-45). It would have been obvious to one skilled in the art at the time of the invention to learn from Theimer that a user interface is selected in response to determining cognitive availability and current needs without user intervention. The user accessing the user interface in McCann is faced with various distractions while in combat. Providing a selection means that minimizes user intervention would be beneficial to the user to concentrate on their surroundings. This provides motivation for McCann to learn from Theimer. Therefore one skilled in the art at the time of the invention would have been motivated to learn from Theimer a user interface is selected in response to determining cognitive availability and current needs without user intervention.

　　McCann and Theimer do not an indication of a number of types of background feedback for which the user has available attention. Smyth discloses an indication of a number of types of background feedback for which the user has available attention. Smyth discloses a user interface that combines a plurality of user interface elements determined to be available for presentation on the computing device. See column 4, lines 41-61. It would have been obvious to one skilled in the art at the time of the invention to learn from Smyth an indication of a number of types of background feedback for which the user has available attention. Smyth discloses providing more user interface options for a user operating a user interface under military operations.

These options can be used to provide the user with a better experience for the system

used in McCann and Theimer. Therefore one skilled in the art at the time of the

invention would have been motivated to learn from Smyth an indication of a number of

types of background feedback for which the user has available attention.

McCann, Theimer and Smyth do not disclose presenting a visual indicator in

peripheral vision of the user. Chai discloses that when the user is determined to have

cognitive availabity for information representing one type of feedback, presenting the

selected predefined user interface comprises presenting one visual indicator in

peripheral vision of the user (column 11, lines 40-60). It would have been obvious to

one skilled in the art at the time of the invention to learn from Chai presenting a visual

indicator in peripheral vision of the user. Presenting the data in peripheral vision of the

user allows for the user to view data without being overloaded with information on the

main view. This provides motivation for McCann, Theimer and Smyth to present data in

the peripheral vision of the user. One skilled in the art at the time of the invention would

have been motivated to learn from Chai presenting a visual indicator in peripheral vision

of the user.

Referring to claim 31, McCann discloses retrieving one or more definitions for

combining available user interface elements in an appropriate manner so as to satisfy

current needs, and wherein the generating of the user interface uses at least one of the

retrieved definitions to combine the user interface elements of the generated user

interface in a manner that is appropriate to the determined current needs (column 2,

lines 32-37).

Referring to claim 32, McCann discloses retrieving one or more definitions for adapting available user interface elements to a type of computing device, and wherein the generating of the user interface uses at least one of the retrieved definitions to combine the user interface elements of the generated user interface in a manner specific to the type of the computing device (column 2, lines 32-37).

Referring to claim 33, McCann discloses a method for dynamically presenting an appropriate user interface to a user of a computing device based on a current context (column 2, lines 32-34). McCann discloses presenting a first user interface to the user without user intervention, determining that the current context has changed in such a manner that the first user interface is not appropriate for the user (column 2, lines 38-48). McCann discloses that the changed context including at least one of a change in a current location of the user, a change in a current mental state of the user, or a change in one or more devices currently available to the user (column 2, lines 38-48). McCann discloses selecting a second user interface that is appropriate for the user based at least in part on the current context and a current cognitive availability of the user, the current cognitive availability is a function of an amount of attention the user uses during a computer-assisted task and presenting the second user interface to the user (column 2, lines 38-48).

Referring to claim 34, McCann discloses determining that the current context has changed in such a manner that the first user interface is not appropriate for the user includes automatically detecting the changes (column 2, lines 32-34).

Referring to claim 35, McCann discloses selecting of the second user interface is performed without user intervention (column 2, lines 43-48).

Referring to claim 36, McCann discloses that the second user interface is one of multiple predefined user interfaces (column 2, lines 38-53).

Referring to claim 37, McCann discloses that the second user interface is dynamically generated after the determining of the changes in the current context (column 2, lines 43-48).

Referring to claim 38, McCann discloses that the second user interface is a modification of the first user interface (column 2, lines 43-48).

Referring to claim 39, McCann discloses modifying of the first user interface ("UI") includes modifying prominence of one or more UI elements of the first user interface, modifying associations between the UI elements, modifying a metaphor associated with the first user interface, modifying a sensory analogy associated with the first user interface, modifying a degree of background awareness associated with the first user interface, modifying a degree of invitation associated with the first user interface, and/or modifying a degree of safety of the user based on one or more indications presented as part of the second user interface that were not part of the first user interface (column 2, lines 43-48).

Referring to claim 44, McCann discloses a method for dynamically determining requirements for a user interface that is currently appropriate to be presented to a user of a computing device based on a current context (column 2, lines 32-34). McCann discloses dynamically determining at least one value representative of one or more

current characteristics of a user interface that is currently appropriate to be presented to

the user, the determining based at least in part on the current context (column 2, lines

38-40). McCann discloses dynamically determining at least one value representative of

cognitive availability of the user, the cognitive availability is a function of an amount of

attention the user uses during a computer-assisted task (column 2, lines 43-45).

McCann discloses identifying at least some of the determined characteristics as

requirements for a user interface that is currently appropriate to be presented to the

user (column 2, lines 38-42). McCann discloses determining a user interface that

satisfies the determined requirements and presenting the determined user interface to

the user (column 2, lines 32-38). McCann does not clearly disclose that the dynamically

determining is done without user intervention. Theimer discloses that a user interface is

selected in response to dynamically determining current characteristics that is currently

appropriate without user intervention (column 13, lines 29-45). It would have been

obvious to one skilled in the art at the time of the invention to learn from Theimer

dynamically determining is done without user intervention. The user accessing the user

interface in McCann is faced with various distractions while in combat. Providing a

selection means that minimizes user intervention would be beneficial to the user to

concentrate on their surroundings. This provides motivation for McCann to learn from

Theimer. Therefore one skilled in the art at the time of the invention would have been

motivated to learn from Theimer dynamically determining is done without user

intervention.

McCann and Theimer does not disclose that based on a comparison of at least one value of representative of current characteristics of a user interface and at least one value representative of cognitive availabity of the user presenting the user interface. Smyth discloses that based on a comparison of at least one value of representative of current characteristics of a user interface and at least one value representative of cognitive availabity of the user presenting the user interface.   See column 4, lines 41-61. It would have been obvious to one skilled in the art at the time of the invention to learn from Smyth that based on a comparison of at least one value of representative of current characteristics of a user interface and at least one value representative of cognitive availabity of the user presenting the user interface. Smyth discloses providing more user interface options for a user operating a user interface under military operations. These options can be used to provide the user with a better experience for the system used in McCann and Theimer. Therefore one skilled in the art at the time of the invention would have been motivated to learn from Smyth that based on a comparison of at least one value of representative of current characteristics of a user interface and at least one value representative of cognitive availabity of the user presenting the user interface.

McCann, Theimer and Smyth do not disclose presenting a visual indicator in peripheral vision of the user. Chai discloses that when the user is determined to have cognitive availabity for information representing one type of feedback, presenting the selected predefined user interface comprises presenting one visual indicator in peripheral vision of the user (column 11, lines 40-60). It would have been obvious to

one skilled in the art at the time of the invention to learn from Chai presenting a visual

indicator in peripheral vision of the user. Presenting the data in peripheral vision of the

user allows for the user to view data without being overloaded with information on the

main view. This provides motivation for McCann, Theimer and Smyth to present data in

the peripheral vision of the user. One skilled in the art at the time of the invention would

have been motivated to learn from Chai presenting a visual indicator in peripheral vision

of the user.

Referring to claim 46, McCann discloses determining of the current

characteristics includes determining characteristics corresponding to a current task

being performed, determining characteristics corresponding to a current situation of the

user, and/or determining characteristics corresponding to current I/O devices that are

available (column 2, lines 32-37).

Referring to claim 57, McCann discloses a method for dynamically determining

characteristics of a user interface that is currently appropriate to be presented to a user

of a computing device (column 2, lines 11-24). McCann discloses dynamically

determining a level of attention which the user can currently give to the user interface

based in part on the cognitive availability of the user, the cognitive availability is a

function of an amount of attention the user uses during a computer-assisted task

(column 2, lines 32-45), where based on the attention that the soldier can give the user

interface, an appropriate user interface is provided. McCann discloses dynamically

determining one or more current characteristics of a user interface that is currently

appropriate to be presented to the user based at least in part on the determined level of

attention (column 2, lines 32-42). McCann discloses presenting the determined user

interface to the user (column 2, lines 32-38). McCann does not clearly disclose that the

determining the user interface is done without user intervention. Theimer discloses that

a user interface is selected in response to determining current characteristics that is

currently appropriate without user intervention (column 13, lines 29-45). It would have

been obvious to one skilled in the art at the time of the invention to learn from Theimer

determining is done without user intervention. The user accessing the user interface in

McCann is faced with various distractions while in combat. Providing a selection means

that minimizes user intervention would be beneficial to the user to concentrate on their

surroundings. This provides motivation for McCann to learn from Theimer. Therefore

one skilled in the art at the time of the invention would have been motivated to learn

from Theimer determining the user interface is done without user intervention.

McCann and Theimer do not disclose that the user interface is selected based on

the value of user's background awareness, task switched attention and parallel

attention. Smyth discloses that cognitive availability is based on the user's background

awareness, task switched attention and parallel attention.   See column 4, lines 41-61.

It would have been obvious to one skilled in the art at the time of the invention to learn

from Smyth that cognitive availability is based on the user's background awareness,

task switched attention and parallel attention. Smyth discloses providing more user

interface options for a user operating a user interface under military operations. These

options can be used to provide the user with a better experience for the system used in

McCann and Theimer. Therefore one skilled in the art at the time of the invention would

have been motivated to learn from Smyth that cognitive availability is based on the user's background awareness, task switched attention and parallel attention.

McCann, Theimer and Smyth do not disclose presenting a visual indicator in peripheral vision of the user. Chai discloses that when the user is determined to have cognitive availabilty for information representing one type of feedback, presenting the selected predefined user interface comprises presenting one visual indicator in peripheral vision of the user (column 11, lines 40-60). It would have been obvious to one skilled in the art at the time of the invention to learn from Chai presenting a visual indicator in peripheral vision of the user. Presenting the data in peripheral vision of the user allows for the user to view data without being overloaded with information on the main view. This provides motivation for McCann, Theimer and Smyth to present data in the peripheral vision of the user. One skilled in the art at the time of the invention would have been motivated to learn from Chai presenting a visual indicator in peripheral vision of the user.

Referring to claim 59, McCann discloses the determined level of attention is based on a determined current cognitive load of the user (column 2, lines 32-42).

Referring to claim 60, McCann discloses the determining of the current characteristics is performed without user intervention (column 2, lines 32-42).

Referring to claim 71, McCann discloses cognitive availability comprises the user's precognitive state is unavailable (column 2, lines 32-34).

Referring to claim 72, McCann discloses cognitive availability comprises the user has enough background awareness available to receive one or more types of feedback or status (column 2, lines 22-24).

Referring to claim 73, McCann discloses cognitive load comprises cognitive demand (column 2, lines 43-45).

Referring to claim 74, McCann discloses cognitive load comprises cognitive availability (column 2, lines 43-45).

Referring to claim 75, McCann discloses cognitive load comprises degree to which working memory is engaged (column 2, lines 43-45).

Referring to claim 76, McCann discloses cognitive availability comprises the user's precognitive state is unavailable (column 2, lines 43-45).

Referring to claim 77, McCann discloses cognitive availability comprises the user having enough background awareness available to receive one or more types of feedback or status (column 2, lines 22-24).

Referring to claim 79, McCann, Theimer and Smyth disclose that the user is determined to have cognitive availability for information representing two types of feedback, presenting the selected predefined user interface comprises presenting one visual indicator in peripheral vision of the user and presenting an audible indicator (column 4, lines 41-61).

Referring to claim 80, McCann, Theimer and Smyth disclose automatically selecting, without user intervention, is a function of the determined cognitive availability of the user, the user context and a value characterizing at least one of complexity of the

task, urgency of the task, familiarity of the task, and whether steps of the task may be performed in any order (Smyth, column 4, lines 41-61).

Response to Arguments

3.   Applicant's arguments filed 8/5/11 have been fully considered but they are not persuasive.

Applicant argues that Chai does not disclose when the user is determined to have cognitive availability for information representing one type of feedback. The Examiner respectfully disagrees. The objective of Chai is for determining the type of feedback that a user can handle based on the cognitive skills that the user at a time has. Chai discloses changing the amount of information that is presented to the user to assess the user's cognitive capabilities therefore the feedback presented to the user is changed. Task loading determines what cognitive load the user is dealing with at the moment and the feedback that is required. In Chai, task loading is used to determine the cognitive skills or demands of the user at the time and it is determined if feedback is appropriate based on this task loading.

Applicant argues that McCann does not disclose a value indicative of expertise of the user. The Examiner respectfully disagrees. McCann discloses system information that holds the expertise and appropriate information for a mission (column 4, lines 33-43). The SAM comprises values indicative of the expertise of the user including information associated with the soldier and the mission to

determine the tasks, the task load and appropriate attention that the user is able to give to the user interface. The type of mission that the user is going on reads on the expertise of the user directed to the user's expertise in a distinct sector of the military. Furthermore, upon gathering of data on the field including dealing with various types of situation, the information that is gathered and presented to the user is customized to the soldier's current condition. A set of preconfigured icons may be combined to generate a newly customized user interface that is appropriate to the soldier's current condition.

Conclusion

4.   Responses to this action should be submitted as per the options cited below: The United States Patent and Trademark Office requires most patent related correspondence to be: a) faxed to the Central Fax number (571-273-8300) b) hand carried or delivered to the Customer Service Window (located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), c) mailed to the mailing address set forth in 37 CFR 1.1 (e.g., P.O. Box 1450, Alexandria, VA 22313-1450), or d) transmitted to the Office using the Office's Electronic Filing System.

Any inquiry concerning this communication or earlier communications for the examiner should be directed to Namitha Pillai whose telephone number is (571) 272-4054. The examiner can normally be reached from 10:00 AM – 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boris Pesin can be reached on (571) 272-4070.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Namitha Pillai
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October 3, 2011

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